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09/466,279	12/17/1999	HAJIME INOUE	SONYJP-3.0-0	9975

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EXAMINER
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SHELTON, BRIAN K

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/466,279

Applicant(s)

INOUE ET AL.

Examiner

Brian Shelton

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 3-11, 13-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-11, 13-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This Action is in response to Applicants' Amendment, filed March 29, 2004.
2. The Application has been examined. Amended claims 1, 3-11, and 13-20 are pending. The objections and rejections cited are as stated below:

#### *Claim Objections*

3. Claim 4 is objected to because of the following informalities:

In claim 4, line 3, "identification members" should be changed to  
--identification numbers--.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

4. **Claims 1, 3-11, and 13-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino et al. (Yoshino), European Patent Publication EP 853402A2 in view of Koyama et al. (Koyama), U.S. Patent No. 6,333,739.

As for **claims 1 and 11**, Yoshino discloses *a receiving apparatus and corresponding method for receiving a digital broadcast which comprises a transport stream in which video data and audio data have been compressed and*

*multiplexed* (IRD **102**; see col. 3, lines 29-36 where IRD **102** is described as a digital satellite broadcasting receiver inherently receiving compressed and multiplexed data), comprising:

- (a) *a decoder for decoding the transport stream* (video processing section **303**; see col. 4, lines 17-24);
- (b) *a digital interface for mutually transmitting the decoded transport stream to and receiving the decoded transport stream from digital signal processing devices* (digital connection interface **304**; see col. 4, lines 13-24); and
- (c) *a register for selecting a predetermined number of devices from among a plurality of digital signal processing devices connected to said digital interface* (col. 4, lines 38-47, disclosing connected device memory) *and for allocating identification numbers to said selected devices* (col. 4, lines 38-47, disclosing communication function pair memory; see col. 10, lines 3-9 disclosing selection of multiple communication pairs; see also col. 5, lines 19-21 discussing assignment of device ID numbers), *for each of said selected devices, said register storing a record of said identification number allocated to said selected device* (col. 4, lines 38-47, discussing storage of device name and ID numbers, including communication pair function memory and communication configuration memory).

But Yoshino fails to disclose maintaining said record regardless of whether the selected digital signal processing devices remain connected to the digital interface or not

However, Koyama, in an analogous art, discloses maintaining a registration (col. 5, lines 34-38, discussing correlation of node ID and **unique ID of connected devices** and storage of node ID and **unique ID** data pairs in memory), regardless of whether the selected devices remain connected to the digital interface or not (see col. 6, lines 34-45 discussing retrieving **unique ID values** with node ID values following a bus reset; see col. 7, lines 8-11 discussing reconnection of a previously connected device) for the benefit of allowing a device connected to a network to be temporarily removed from the network without necessitating reconfiguration of the network upon reconnection of said device.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the register of Yoshino to include maintaining a registration, regardless of whether said selected device remains connected to the digital interface, as taught by Koyama, for the benefit of allowing a device connected to a network to be temporarily removed from the network without necessitating reconfiguration of the network upon reconnection of said device in a receiving apparatus.

The limitation of **claims 3 and 13** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 11. Specifically, Koyama teaches a register which confirms whether a device connected to said digital interface has already been allocated an identification number when said device is connected to the digital interface (see col. 6, lines 34-45 discussing comparison of allocated ID numbers (e.g., unique ID values stored in table file **601**) with associated node ID values following a bus reset; see col. 7, lines 8-11 discussing reconnection of a previously connected device).

The limitation of **claims 4 and 14** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 11. Specifically, Koyama discloses a register that automatically allocates said identification numbers to the predetermined number of devices which were first connected to said digital interface from among said plurality of digital signal processing devices connected to the digital interface (see col. 6, lines 46-50 discussing retrieval of previously stored Unique ID and reassignment of node ID to reset node ID following a bus reset; see also col. 7, lines 7-11 describing the case of automatic registration where a connected device was previously connected; compare to col. 7, lines 12-20, describing case where a "newly added device" is connected).

The limitation of **claims 5 and 15** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 11. Specifically, Yoshino discloses an apparatus wherein said records stored in said register may be changed by user input (col. 8, lines 10-25, describing user selection of a source device; col. 8, lines 26-35 describing selection of a target device).

The limitation of **claims 6 and 16** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 11. Specifically, Koyama discloses when said identification numbers have been previously allocated to said predetermined number of devices, said register prohibits cancellation of said records stored in said register (see col. 6, lines 34-45 discussing comparison of unique ID values with node ID values following a bus reset; see col. 7, lines 8-11 discussing reconnection of a previously connected device, wherein the unique ID corresponding to a previously connected device is used to change the node ID to the reset node ID in table file **601**; see col. 7, lines 20-28, wherein the display position of display information corresponding to a previously connected (i.e., registered) device is maintained following the disconnection of the device from the bus; see also col. 7, lines 55-58 and Figs. **11A** and **11B** wherein the display position of a previously registered device is maintained following its disconnection from the network. By contrast, if the register disclosed by Koyama to the case were not employed, personal

computer **104** would be unable to ascertain whether a device connected to the digital interface had been previously connected following a bus resetting event; (i.e., the removal of a device from a 1394 interface results in a bus reset, wherein the node ID numbers of devices are reassigned, so a device that appeared to PC **104** at node ID 3 could appear as if were connected at node ID 1 following a bus reset. PC 104 would be unable to ascertain whether the device had been previously connected, and the registration of the connected device would be cancelled. The registration process disclosed by Koyama avoids such a result and, thus, prohibits the cancellation of a previously connected device.) see col. 4, lines 21-31).

The limitation of **claims 7 and 17** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 11. Specifically, Koyama discloses a display processing circuit for displaying a list of selected devices (Fig. 5; see col. 5, lines 48-57 describing output of the display device which includes icons **501**, **502** and **503** indicating connected devices).

The limitation of **claims 8 and 18** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 7 and 17. Specifically, Koyama teaches the display processing circuit is operable to visually discriminate between devices connected to the digital interface and devices not connected to said digital interface from among said selected devices (Fig. 8; col.



6, lines 59-62, describing displaying the icon representing a disconnected device more vaguely than other icons).

The limitation of **claims 10 and 20** is encompassed by the teachings of Yoshino in view of Koyama, as discussed above relative to claims 1 and 10. Specifically, Yoshino discloses an apparatus comprising display means for displaying a selection screen to select a device from said selected devices (Figs. **13 and 15**; col. 8, lines 10-25, describing user selection of a source device; col. 8, lines 26-35 describing selection of a target device).

5. **Claims 9 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshino et al. (Yoshino), European Patent Publication EP 853402A2 in view of Koyama et al. (Koyama), U.S. Patent No. 6,333,739, as applied to claims 7 and 17 above, and further in view of Horlander et al. (Horlander), U.S. Patent No. 6,507,953.

As for **claims 9 and 19**, the teachings of Yoshino in view of Koyama are relied upon as discussed above relative to claims 7 and 17. Koyama discloses when an operation is performed to change said record of a device, said display processing circuit generates a predetermined warning display (see Fig. **11A** describing display output for the situation where devices DVC101, DVC102, and DVC103 are connected; see Fig. **11B** and display corresponding to removal of DVC102 and the associated "COMMUNICATION IMPOSSIBLE" warning

message; see col. 7, lines 55-65). But Yoshino in view of Koyama fails to disclose the operation performed to change the record of a device comprising a device in which a program recording reservation has been set, as claimed.

However, Horlander, in an analogous art, teaches a system for interfacing multiple electronic devices wherein the DSS (i.e., IRD) communicates with a VCR to determine scheduling conflicts (e.g., recording reservations) and error conditions and presents conflicts and errors the user in a log format (col. 4, lines 12-26, see col. 7, line 66 – col. 8, line 14) for the benefit of notifying a user of the inability of a networked device to perform a previously scheduled operation.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the operation of Yoshino in view of Koyama to incorporate the a device in which a program recording reservation has been set, as taught by Horlander, for the benefit of notifying a user of the inability of a networked device to perform a previously scheduled operation in a receiving apparatus.

### ***Response to Arguments***

6. Applicants' arguments filed March 29, 2004 (see Applicants' Amendment dated March 29, 2004 at pages have been fully considered but they are not persuasive.

The argument presented by Applicants is directed generally towards the Examiner's application of the Koyama reference to teach a limitation missing from the Yoshino reference, and more specifically, Applicants dispute the use of

Koyama to teach the limitation of "maintaining a registration...whether the selected devices have been connected to the digital interface or not." (Applicants' Amendment dated March 29, 2004, (hereinafter "Amendment") at page 11, 2<sup>nd</sup> paragraph). The limitation at issue originally appeared in dependent claims 2 and 12. Applicants' instant amendment cancels claims 2 and 12 and incorporates the limitation in claims 1 and 11. In amending claims 1 and 11, Applicants now present this limitation in substantially the same form, as "...for each of said selected devices, said register storing a record of said identification number allocated to said selected device and maintaining said record regardless of whether said selected device remains connected to said digital interface." (Amendment at page 4, claim 1, lines 12-16).

However, as will be demonstrated below, the reliance on Koyama was proper and fully teaches the limitation at the center of Applicants' dispute, both as originally presented and in the amended form, as detailed below.

In Applicants' remarks, much is made of the Koyama's description of a "bus resetting" event and the subsequent node ID reassignment. Applicants seize upon the reassignment of the node ID following a bus reset as evidence that the reliance on Koyama to teach the limitation at issue was improper, stating, "Thus, to put it simply, the deletion of a device causes the bus to re-set and each device to be given a new node ID. This is completely opposite to that which is asserted by the Examiner." (Amendment at page 11, 2<sup>nd</sup> paragraph). Apparently, Applicants' are relying on the fact that node ID values are reassigned

(i.e., dynamic) following a bus reset event as evidence that registration of the selected devices is not maintained.

However, examination of Koyama's teaching demonstrates that the fact that the node ID value for each of the connected devices is dynamically reassigned each time a bus resetting event occurs is clearly not evidence that a registration is not maintained. In the rejection of claims 2 and 12 (see Office Action, dated 11/26/2003, (hereinafter "First Action") at page 5, 1<sup>st</sup> paragraph), The Examiner made reference to Koyama at col. 5, lines 34-38, which states,

"The control unit **404** of the PC **104** correlates, at each bus resetting, the node ID (**201-202**) assigned to each node and the unique ID (**301-303**) assigned to such node and stores and manages such ID's in the memory device **403** such as a hard disk."

Further, the unique ID is defined as "...composed of a vendor ID **301** of 3 bytes and a chip ID **302, 303** of 5 bytes." Koyama at col. 4, lines 57-58; see also col. 6, lines 42-43. Moreover, "...the unit ID (**301-303**) [i.e., the Unique ID] of each node is *fixed and a same ID does not occur in any two nodes.*" Id. at col. 4, lines 62-63 (emphasis added). Koyama utilizes the fixed nature of the unique ID to maintain communication with devices following the reassignment of the dynamic node ID, as evidenced by the following statement:

"The communication system of the present embodiment, even in case a bus resetting occurs in the course of communication and the node ID's of the devices are changed, can re-start the communication after such bus resetting by inquiring the reset node ID *utilizing the unique ID (**301-303**) inquired in advance to each device.*"

Koyama at col. 5, lines 18-24 (emphasis added).

Also, the explanation provided in the rejection of claims 2 and 12 provided additional clarification that the unique ID, and not the node ID, of each device was the element in Koyama's invention that provided for maintaining registration of devices. In particular, Applicants were referred to Koyama at col. 6, lines 34-45, which describes the sequence of acquiring the unique ID's of each of the connected device following a bus resetting event (e.g., the removal of a device). (First Action at page 5, 1<sup>st</sup> paragraph).

Applicants, though, appear to misinterpret this process, as evidenced by the statement, "Further in this regard, *Koyama* discloses that the newly acquired unique ID of each devices is thereafter recorded in table file 601." see Applicants' Amendment at page 11, 3<sup>rd</sup> paragraph, citing to Koyama at col. 6, lines 46-49.

But the actual wording of the passage Applicants' rely on demonstrates the flaw in Applicants' interpretation of the Koyama reference. To wit, the passage states:

*"After acquiring the unique ID of each device, the PC 104 retrieves such unique ID in the table file 601 prepared before the bus resetting, and, upon finding such unique ID, changes the node ID recorded in the table file 601 to the reset node ID."*

Koyama at col. 6, lines 46-50 (emphasis added).

Thus, Koyama is not describing "the newly acquired unique ID of each device" being "recorded in the table file," as Applicants' suggest. Rather, Koyama is describing the process of comparing the unique ID values for devices connected to the system following a bus resetting event to the unique ID values

that were stored in the table prior to the bus resetting event, and upon finding a match between the prior unique ID and the present unique ID, changing the node ID values to reflect the current node assignment. As discussed above, the node ID values are dynamically reassigned following a bus resetting event.

Accordingly, as demonstrated above, Koyama is teaching storing unique ID values and associated node ID values for each device. Then, following a bus resetting (e.g., change in connection status of connected devices), Koyama teaches maintaining the registration of the system devices by comparing the unique ID values of the presently connected devices to the unique ID values of the previously connected devices.

Applicants' misplaced reliance on the node ID reassignment is further evidenced by the argument:

"Even assuming *arguendo* that the Examiner's assertion that *Koyama* discussed connection of a previously connected device was true, this paragraph [referring to *Koyama* at col. 7, lines 8-11] explicitly states that the PC 104 'changes the node ID recorded in the table file 601 to the reset node ID.' Thus, this portion of *Koyama* (as well as col. 6, lines 46-46) completely refutes the Examiner's assertion that *Koyama* teaches or suggests the advantage of allowing a device to be temporarily removed or added to a network without necessitating reconfiguration of the network upon reconnection of the device."

Applicants' Amendment at page 12, 1<sup>st</sup> paragraph.

Again, Applicants' argument is flawed by a misunderstanding of the function of the reassigned node ID. As discussed above, the Unique ID values of each connected device are stored in a table, along with node ID values, which represent the current connection configuration, associated with each device.

Following a bus resetting event (e.g., adding or removing a connected device), the system retrieves the Unique ID values for each of the presently connected devices and compares these values to the Unique ID values of previously (i.e., prior to the bus reset) connected devices. When a Unique ID value stored in the table file 601 matches a Unique ID of a presently connected device, PC 104 can determine that this device was previously connected (e.g., registered), and upon making this determination, reassign the node ID value stored in the table file 601, to the new value (reset node ID), thus 'maintaining registration'.

Simply stated, the fact the Node ID values change following a bus resetting event is no evidence that the registration of the connected devices is not maintained. Moreover, the storage of Unique ID values for connected devices in table file 601 and updating the assigned node ID allows PC 104 not only to determine whether a device is connected following a bus resetting event, but further allows PC 104 to communicate with each of the connected devices in the same manner even though the node ID values are dynamically assigned following a reset event.

Finally, Applicants' represent the limitations of claim 1 and 11 at issue to support the proposition that the limitations have not been taught by Yoshino in view of Koyama. (Amendment at page 12, 1<sup>st</sup> paragraph – page 13, 1<sup>st</sup> paragraph). However, The Examiner has demonstrated that, "for each of said selected devices, said register (e.g., table file 601) storing a record of said identification number (e.g., unique id) allocated to said selected device and

maintaining said record regardless of whether said selected device remains connected to said digital interface (e.g., bus resetting event and subsequent associating of the *dynamic node ID* value with the *stored unique ID* value).

Having fully addressed Applicants' arguments concerning the reliance on Koyama and demonstrating that the limitation at issue is fully taught, Applicant's arguments are thus found unpersuasive.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Art Unit: 2611

8. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Shelton whose telephone number is (703) 305-8714. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner, Christopher Grant can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Brian Shelton  
Examiner  
Art Unit 2611

BS

  
CHRIS GRANT  
PRIMARY EXAMINER